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WO 2004/038091 A1

(54) Title: LIGHT-STABLE AND PROCESS-STABLE LIGNOCELLULOSIC MATERIALS AND THEIR PRODUCTION

(57) Abstract: A novel method for the production of light-stable and process-stable lignocellulosic materials, in particular, the production of mechanical wood pulps with much improved light and process stability is described, as well as the resulting pulps of improved light and process stability and papers containing such pulps. The novel method involves the reaction of lignocellulosic materials such as bleached chemithermomechanical pulps (BCTMP) with (a) a water-soluble, fibre-reactive yellowing inhibitor possessing two or more secondary amino or ammonium (-NHR' or -HN$^+$HR'), tertiary amino or ammonium (-NR'R" or -HN$^+$R'R"), and/or quaternary ammonium (-N$^+$R'R''R"') functional groups in an aqueous medium, or (b) a water-soluble, fibre-reactive hindered amine light stabilizer possessing said amino or ammonium functional groups in an alkaline peroxide bleaching medium or in an aqueous medium with a subsequent bleaching of the materials in an alkaline peroxide bleaching medium. Examples of the water-soluble, fibre-reactive yellowing inhibitors are the novel, N-(2,2,6,6-tetramethyl-1-oxyl-piperidin-4-yl)-N'-{2-[2-(2,2,6,6-tetramethyl-1-oxyl-piperidin-4-ylamino)-ethylamino]-ethyl}-ethane-1,2-diamine (abbreviated as TETA-2TEMPO) and its hydroxylamine hydrochloride derivative, N-(2,2,6,6-tetramethyl-1-hydroxyl-piperidin-4-yl)-N'-{2-[2-(2,2,6,6-tetramethyl-1-hydroxyl-piperidin-4-ylamino)-ethylamino]-ethyl}-ethane-1,2-diamine hexahydrochloride (abbreviated as TETA-2TEMPOH-6HCl).